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## STEEL PLANTS MECHANIZE, PLEDGE SAVINGS

Numbers ... parentheses refer to appended list of sources.

Some ferrous metallurgy enterprises have realized production increases through mechanization of equipment and adoption of new processes. Savings of fuel and production materials continue to be stressed.

Workers of the Moscow "Serp i molot" Plant have considerably increased production of steel and rolled metal this year. The open-hearth shops and rolling mills are now equipped with the latest automatic control instruments which considerably facilitate operations.(1) In the last 3 years, the number of automatic control installations has increased eight times and the number of automatic instruments in use at the plant has doubled. In 1949 alone, as many instruments were put into operation as were installed in 5 years in prewar times. The greatest achievement in 1949 was reconstruction of furnace No 6 of the section-rolling shop. The furnace was completely equipped with control and measuring instruments and with automatic heat-control installations.(2)

Using the latest in technology, a steelworker was able recently to complete a melt in 3 hours 25 minutes as compared with the 4 hours 15 minutes called for in the schedule.(3)

The same success has been achieved in the field of mechanization. In 1947, 20 sectors were mechanized, 33 in 1948 and 43 in 1949. This helped to release nearly 200 workers for work in other sectors.

Additional cranes were installed in the stockyard and special scaffold bridges are used for loading and unloading work. Work has been completely mechanized in the majority of sections of the shape-casting shop where new machines are installed annually. The work of preparing the clay for forming sand has been mechanized in this shop. (2)

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In the section-rolling shop, billets previously had to be placed on the deep-boring machines by hand. A special device has now been created for this operation, and labor productivity has increased. Hand labor in this section has been completely eliminated.(1)

The plant has exceeded the prewar production level by 30-35 percent in all types of products, an impossible feat without the increased mechanization and automatization.

The one element of plant operations in which hand labor is still a large factor is loading and unloading work. Despite the use of heavy-duty gantry cranes, automatic loaders, there are still hand processes in the work. In the open-hearth shops, the work of 300 workers should immediately be mechanized, and the same situation prevails in the sheet-rolling, steel wire, heat and power, and railroad shops.(2)

In the plant's open-hearth shop No 2, a group of engineers and steelworkers have developed the technology for resmelting high-quality metal wastes in open-hearth furnaces. Formerly, these wastes were sent to other plants for use in electric furnaces. In the first quarter 1950, these workers saved the state 200,000 rubles, and for the whole year, should be able to save 3 million rubles by making use of all alloy and high-alloy steel wastes.(4)

The plant's sheet-rolling shop workers have been working together with Professor Anurov, head of the Chair of Chemistry of the Moscow Night Metallurgical Institute, on improving the quality of the steel-pickling process. One result of their combined efforts is that for the first time in the shop stainless steels can be pickled by a machine which formerly could not perform the operation. (5)

The Moscow Hard Alloys Combine has developed a new grade of alloy -- the VK-2. A high-speed metal-cutting Stakhanovite at the Moscow Grinding Machines Plant has had outstanding results recently in using the new alloy. The VK-2 was developed by a brigade of inventors headed by engineer G. Goncharova of the combine. The first test lots of the alloy, designed for effective cutting of cast iron, were made in 1949 and were tested at the "Borets" and "Krasnyy proletarii" plants, the Gor'kiy Automobile Plant imeni Molotov, and others. Good results were obtained by all enterprises. The new alloy proved to be six to seven times as durable as the best of previously used types.(6)

The Hard Alloys Combine, however, according to a Party report on the industry of Dzerzhinskiy Rayon in Mostow, is operating spasmodically.(7)

In July, the pipe-casting plant of the "Mosgormestprom" (Moscow City Local Industry) Trust will have a new experimental shop for centrifugal casting. It is expected that with centrifugal casting, 17 workers will be able to cast 6-8 pipes per hour each, as compared with the present rate of 20-25 pipes cast per day by 200 workers. (8)

The Moscow "Elektrostal" Plant completed its 5-month plan for finished rolled products shead of schedule. (4)

In Kazakhstan, some metallurgical enterprises have also made great strides in introducing mechanization. In the postwar years, there have been tremendous changes at the aktyubinsk Ferroalloy Plant. Production output has been greatly increased without the addition of extra capacity. Production quality has improved and high-grade ferroalloys have been put into production. The economic indexes of the enterprises have also improved.

The plant has installed machinery to perform many labor-consuming operations such as the hauling of slag, production materials, etc. The reorganization of such auxiliary work on mechanized lines has played an important part in the modernization of the major work, smelting metals. The plant's workers are making effective efforts to improve these processes.

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Only recently, the haulage of slags had been considered one of the most labor-consuming operations, and a large number of workers were used for the job. When slag buckets were put into operation for the first time, the situation radically changed, many workers were released for other work, and the requirement for railroad cars decreased. Transport of dry goods was another labor-consuming operation that has been improved by the use of a skip hoist to feed dry materials into the furnaces. Bridge cranes with grab buckets are used for loading and umloading. Now, instead of 15-20 workers for this operation, only two are used.

At the plant's heat and power plant, new methods of organizing repair work have been adopted, cutting the idleness for repair of turbogenerators by 15 days.

Two of the plant's workers have developed the automatic regulation of the phases of alternating current. This improvement, used for the first time in ferroalloy furnaces, has made it possible to maintain a uniform load throughout the entire working time and to utilize electric power wore efficiently and economically.(5)

The plant's workers have been making high-speed heavyweight melts every day.(9)

The Kazakh Metallurgical Plant in Temir-Tau has also gone far in adopting new technology which increases labor productivity. (5) The plant completed the 5-month plan ahead of schedule for the entire metallurgical cycle. In April and May, the steelworkers completed seven melts on saved fuel and ferromanganese. (10)

In Leningrad, the Kirov Plant has revised some of its methods in order to increase savings of fuel and materials. Rolling-mill workers and open-hearth steelworkers have started a competition with the Moscow "Serp i molot" Plant by which they have pledged to work 2 days per month on three rolling mills on the electric power saved in the shop, to produce ten melts per month on saved ferroalloys, and to work one day on saved fuel.(11) Since making the pledge, the workers have had great success in meeting it. Three of the rolling mills were operated for 4 days, instead of the pledged 2 days, in April on electric power saved throughout the shop. Operators of the heavy-section mill and the three-high sheet mill had particular success. In the drive to save electricity, two rolling mills in the shop have been operating simultaneously from the same electric motor. Increased speeds in machining many types of parts have been adopted in the third and tenth machine shops. Automatic instead of hand electric welding has been introduced in several shops. Some of the cld power transformers have been replaced throughout the plant and several sections of the electric-power system have been rebuilt. This made it possible for the entire plant to operate almost one full day (24 hours) in April on saved electric power.

Open-hearth workers completed 15 melts, instead of the ten pledged, on saved pig iron and ferroalloys. Sufficient refractory brick was saved to complete medium repairs on one furnace. An improvement in the method of lubricating the casting molds has cut consumption of the expensive varnish in half and increased labor productivity five times.(12)

The Kirov Plant is one of the 50 Leningrad plants meeting orders for the Estonian SSR. So far in 1950, the plant has shipped more than 50 tons of round and bar steel for Estonian machine-building enterprises.(13)

In the Latvian SSR, steelworkers at the "Krasnyy metallurg" Plant in Liyepaya have converted to high-speed smelting. The Stakhanovite work of the steelworkers has made it possible to operate the rolling mills at full capacity. (14)

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The Vyartsilya Metallurgical Flant, Karelo-Finnish SSN, completed ahead of schedule the May plan for steel output.(15)

In the Urals, the Verkh-Isetskiy Plant, Sverdlovsk Oblast, completed the 5-month plan for the entire metallurgical cycle on 26 May. In 4 months of 1950, the plant's production of steel increased 13 percent and of finished rolled products 15.4 percent over the same period in 1949. During this 4-month period, more than 600,000 rubles above plan were saved.(16)

Blast-furnace workers at the Novo-Tagil'skiy Metallurgical Plant have pledged to save 8,240,000 rubles' worth of ore, coke, and limestone in 1950 and to work 12 days on the saved ore, 6 days on the saved coke, and 38 days on the saved limestone.(17) One blast-furnace brigade in May achieved a coefficient of 0.80 as compared with the planned 0.86.(18)

At the Kuznetsk Metallurgical Combine, blast-furnace workers have been obtaining a coefficient of 0.85 for capacity utilization of the furnace as compared with the norm of 0.89.(19)

In Chita Oblast, the open-hearth shop of the Petrovsko-Zabaykal'skiy Metallurgical Plant was awarded the Transferable Red Banner of the Council of Ministers USSR and first place in the first-quarter All-Union competition. The plant completed its production plan for the first quarter ahead of schedule and became one of the leading enterprises in the oblast. The plant's steelworkers have pledged to increase the durability of the furnace roof to 255 melts as a year average. Steelworkers using high-speed methods are completing melts in 6 hours 50 minutes as compared with the scheduled time of 8 hours 30 minutes.(20)

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